

Fourth Grade Science Standard: 4.2P: Describe physical changes in matter and explain how they occur

Key Point: Matter is always changing. When matter undergoes a chemical change, the change is permanent. Discuss with students what chemical changes happen daily (cooking food, soap mixing with oil, candle burning, etc).

Supplies: sandwich bags for each student, vinegar, baking soda, measuring cups/spoons

Experiment:

Students will use vinegar (acid) and baking soda (base).

1. Place 1 tsp baking soda in a sandwich bag. Describe properties of the baking soda.
2. Put 3 oz vinegar in a small cup, and carefully place in bag. Draw picture of experiment in science journal.
3. Hypothesis: What do you think will happen when the 2 substances mix? Write prediction in science journal.
4. Tip the cup over so the vinegar mixes with the baking soda. Students make observations (fizzes/gas/bag will pop).
5. Students observe substances left in bag. Are they the same? How have they changed?
6. Class discussion: How is a chemical change different from a physical change (ice melting, etc)?